## MODIS sensor Working Group (MsWG) Meeting Summary March 8, 2006

**Attendance:** Stuart Biggar, Nianzeng Che, Vincent Chiang, Gene Eplee, Gerhard Meister, Chris Moeller, Junqiang Sun, Brian Wenny, Robert Woodward, Aisheng Wu, Xiaobo Xie, Jack Xiong

### *Scheduled Agenda*

**Item 1: Recent L1B LUT delivery**

- Terra collection 4 forward update – V4.3.0.40 (Feb 21).
- Terra collection 5 forward update – V5.0.6.13 (Feb 22).
- Aqua collection 4 forward update – V4.3.1.26 (Feb 27).
- Aqua collection 5 forward update – V5.0.7.9 (Feb 27).

**Item 2: Instrument status**

- Terra and Aqua MODIS are in nominal operations.
- On day 2006053 02:45 UTC, Terra B27 Ch8 (product order) b1 increased by about 7% when the spacecraft was just over the SAA region in the night orbit. The noise level NEdT of Ch8 also increased.
- Terra SRCA 20W results were not stable recently after switching to constant current mode. MCST requested IOT to perform extra tests and verified that 10W lamp C (#3) was not stable. The radiometric mode activity has been suspended. We will exclude lamp #3 in future SRCA characterization activities. For now, both Terra and Aqua each has two 10W lamps available.

  **CM** – What will be the impacts to the characterization when we lose a lamp?
  **JX** – We will lose radiometric calibration with 30W. Some bands still can do spectral calibration with 1W or 10W, and it is still possible to use 20W in spatial mode.

  **CM** – In terms of operation, can we still have calibration even if we lose all the lamps?
  **JX** – Even if the SRCA is no longer working, it will not impact our L1B calibration. We would like to keep SRCA running if we could for spatial tracking. It's a unique and important characterization for the instrument. Once the lamp gets worse, it means less useful data for RVS. We never use SRCA in Aqua to support RVS. However, we still can use SRCA to track detector-to-detector and mirror-to-mirror difference, and to track long-term stability for Terra.

- There was a possible Terra pointing error on 2006/066 (Mar 7) due to a slightly incorrect TDRSS state file generated and loaded to the Terra spacecraft. A few hours later, the FOT identified the cause of the problem and generated correct products to put Terra back on track.

### *Around the Table*

Participant: **Jack Xiong (MCST) – Works in progress**

- Internal review with Chris about:
  - TEB a0/a2 test.
  - Mirror side correlated noise (MSCN) summary.
- With Oceans group:
  - Sub-frame difference.
  - RSB RVS on Terra, mainly for bands 8-10.

Participant: **Chris Moeller (Atmosphere)**

In the TEB RVS LUT (Terra), there are three generations of RVS, what are those three? I am planning to play with these RVS numbers for VIIRS RVS sensitivity analysis. When we started the pre-launch RVS, did we intend to use the absolute RVS?

**JX** – The first table is pre-launch RVS, the second is on-orbit DSM RVS, and the third is just a copy of the second table. The component measurement (Lincoln Lab) was for absolute reflectance of the scan mirror. But for system level after integration, we use relative RVS for calibration convenience due to many unknown factors (e.g. gain change) in the TEB ambient test environment.

Participant: **Stuart Biggar (Calibration)**

We are working with Langley group reprocessing MISR data. We made some special requests 6 months ago and we are still waiting for the data. The reprocess work is mainly for B3 and 4.

**JX** – Please let us know when they finish, especially when they change calibration. We are working on some data analysis to compare MODIS and MISR. We understand their calibration strategies are different, and the spectral characteristics are different too.

**JX** – As for the RSB RVS, if you have any good idea to fit the RVS with two points data (SD and Moon), please advise.

Next MsWG meeting scheduled on March 29, 2006